Canadian Space Agency

2015–16

Departmental Performance Report

The Honourable Navdeep Bains, P.C., M.P.
Minister of Innovation, Science and Economic Development

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Ministers' Message

We are pleased to report the key results of the Canadian Space Agency for 2015–16.

The programs of the Innovation, Science and Economic Development Portfolio work together to deliver what Canada needs to improve productivity performance, to grow the economy and to enhance prosperity and well-being. That means supporting the government's commitment to develop an Innovation Agenda, which will in turn create good-paying jobs for the middle class, drive growth across all industries, and improves the lives of Canadians. The work of the Portfolio includes helping small businesses grow through trade and innovation, promoting increased tourism to Canada, and supporting scientific research and the integration of scientific considerations in our investment and policy choices.

As we approach Canada's 150th anniversary, we pledge to continue working with stakeholders from across the country to strengthen our place in the global economy.

It is our honour to present the *2015–16 Departmental Performance Report* for the Canadian Space Agency.

The Honourable Navdeep Bains
Minister of Innovation, Science and Economic Development

The Honourable Kirsty Duncan
Minister of Science

The Honourable Bardish Chagger
Minister of Small Business and Tourism and Leader of the Government in the House of Commons

Results Highlights

What funds were used? (2015–16 Actual Spending)	Who was involved? (2015–16 Actual Full-Time Equivalents [FTEs])
412,799,058	591.4

In order to ensure that the Government of Canada's operational needs for space-based Earth observation are continually fulfilled, the Canadian Space Agency (CSA) pursued the RADARSAT Constellation Mission (RCM) and completed most of the RCM satellite units. Assembly, integration and testing of the Synthetic Aperture Radar and the Automated Identification System payloads for two of the three satellites have been completed.

To meet Canada's obligations towards the International Space Station (ISS) and to strengthen research and innovation, the CSA prepared recommendations to government regarding the continuation of Canada's participation in the ISS Program after 2020.

To support innovation and export opportunities, the CSA has successfully managed its investment in the European Space Agency (ESA) in support of access to European markets to ensure that the Canadian industrial return coefficient remains high.

To continue and build on strong relationships with both domestic and international space community leaders, the CSA has initiated the development of a comprehensive framework for engaging key stakeholders to ensure that the economic value of the government's space investments are fully realized. Preliminary engagement mechanisms include regular meetings of government-industry-academia working groups.

To strengthen its capacity to deliver the Canadian Space Program, the CSA reviewed its Investments Governance and Monitoring Framework and associated processes.

Section I: Organizational Overview

Organizational Profile

Minister of Innovation, Science and Economic Development:
The Honourable Navdeep Bains, P.C., M.P.

Minister of Science:
The Honourable Kirsty Duncan, P.C., M.P.

Minister of Small Business and Tourism and Leader of the Government in the House of Commons:
The Honourable Bardish Chagger, P.C., M.P.

Institutional Head:
Sylvain Laporte, President

Ministerial Portfolio:
Innovation, Science and Economic Development

Enabling Instrument(s):
Canadian Space Agency Act, S.C. 1990, c. 13

Year of Incorporation / Commencement:
Established in March 1989

Other:
The Canadian Space Agency was established in 1989. Approximately 90% of its employees work at the headquarters located at the John H. Chapman Space Centre, in St-Hubert, Quebec. The remaining personnel serve the CSA at the David Florida Laboratory and other offices in Ottawa, with officials in Houston, Washington and Paris.

Organizational Context

Raison d'être

The mandate of the Canadian Space Agency[i] (CSA) is *"to promote the peaceful use and development of space, to advance the knowledge of space through science and to ensure that space science and technology provide social and economic benefits for Canadians."*

The CSA is delivering on its mandate in collaboration with Canadian industry, academia, Government of Canada organizations, and other international space agencies or organizations.

Responsibilities

The founding legislation that received Royal Assent in 1990 attributed four main functions to the CSA:

- Assist the Minister to coordinate the space policies and programs of the Government of Canada;
- Plan, direct, manage and implement programs and projects relating to scientific or industrial space research and development and the application of space technology;
- Promote the transfer and diffusion of space technology to and throughout Canadian industry; and
- Encourage commercial exploitation of space capabilities, technology, facilities and systems.

Strategic Outcome(s) and Program Alignment Architecture

1. Strategic Outcome: Canada's exploration of space, provision of space services and development of its space capacity meet the nation's needs for scientific knowledge, innovation and information.

1.1 Program: Space Data, Information and Services

1.1.1 Sub-Program: Earth Orbit Satellite Missions and Technology

1.1.1.1 Sub-Sub-Program: Earth Observation Missions

1.1.1.2 Sub-Sub-Program: Communications Missions

1.1.1.3 Sub-Sub-Program: Scientific Missions

1.1.2 Sub-Program: Ground Infrastructure

1.1.2.1 Sub-Sub-Program: Satellite Operations

1.1.2.2 Sub-Sub-Program: Data Handling

1.1.3 Sub-Program: Space Data, Imagery and Services Utilization Development

1.1.3.1 Sub-Sub-Program: Earth Observation Data and Imagery Utilization

1.1.3.2 Sub-Sub-Program: Communications Services Utilization

1.1.3.3 Sub-Sub-Program: Scientific Data Utilization

1.2 Program: Space Exploration

1.2.1 Sub-Program: International Space Station (ISS)

1.2.1.1 Sub-Sub-Program: International Space Station Assembly and Maintenance Operations

1.2.1.2 Sub-Sub-Program: International Space Station Utilization

1.2.2 Sub-Program: Exploration Missions and Technology

1.2.2.1 Sub-Sub-Program: Space Astronomy Missions

1.2.2.2 Sub-Sub-Program: Planetary Missions

1.2.2.3 Sub-Sub-Program: Advanced Exploration Technology Development

1.2.3 Sub-Program: Human Space Missions and Support

1.2.3.1 Sub-Sub-Program: Astronaut Training and Missions

1.2.3.2 Sub-Sub-Program: Operational Space Medicine

1.2.3.3 Sub-Sub-Program: Health and Life Sciences

1.3 Program: Future Canadian Space Capacity

1.3.1 Sub-Program: Space Expertise and Proficiency

1.3.2 Sub-Program: Space Innovation and Market Access

1.3.2.1 Sub-Sub-Program: International Market Access

1.3.2.2 Sub-Sub-Program: Enabling Technology Development

1.3.3 Sub-Program: Qualifying and Testing Services

1.4 Internal Services

Descriptions of Programs are in Section III. Descriptions of Sub-Programs and Sub-Sub-Programs are available on CSA's website.[ii]

Operating Environment and Risk Analysis

Key Risks

Risk	Risk Response Strategy	Link to the Organization's Program(s)
Gap between stakeholders' expectations and CSA's provision of services Because of possible interruption of missions in progress, insufficiency of infrastructures or personnel in place, delays in project implementation or changes in stakeholders' requirements and priorities, there was a risk of a gap between the partners' expectations and the data and services provided by the CSA.	– Ongoing consultations with federal departments and the academic community regarding long-term requirements; – Ongoing consultations during preliminary project phases regarding requirements; – Optimal management of the allocation of RADARSAT-2 data portion of the Government of Canada's credit; – Monitoring of space objects and taking collision-avoidance measures in order to minimize the risk of serious damage to the RADARSAT-2; and – Annual update of Human Resources Plan.	1.1 Space Data, Information and Services 1.2 Space Exploration 1.3 Future Canadian Space Capacity
Space sector capacity Canada's space sector capacity may be at risk with the arrival of new players, uncertain investment levels and potential technology development issues. Insufficient capacity to continue R&D and market Canadian products and services globally could impede Canada's ability to leverage existing growth opportunities or seek new ones.	– Ongoing updating of the Canadian space technology requirements spectrum; – Promotion of partnerships between the private sector, the academic community and the CSA; – Ongoing monitoring of Canadian space sector conditions; and – Partnerships with foreign space agencies, expanding academia and industry opportunities to participate in the development of international missions.	1.1 Space Data, Information and Services 1.2 Space Exploration 1.3 Future Canadian Space Capacity

Cost increase Because of unexpected technological challenges, changing requirements or delays in project implementation, there was a risk that project costs could have been higher than estimated.	– Reduce technological uncertainty by implementing technology development activities early in the project; – Assess projects' risks and allocate a financial margin based on the risks' impact and probability levels; – Implement improved project management methodology; and – Where applicable, implement acquisition strategies based on risk sharing with industry partners.	1.1 Space Data, Information and Services 1.2 Space Exploration

Risks Discussion

Many federal departments and scientific communities rely on space-based data to deliver on their agenda. In a rapidly evolving context, with various needs and long-term time frames to develop assets, there was a risk of gaps between the services provided and the services needed by the users. In order to ensure continuity of Earth observation data for Government of Canada (GoC) operational services, the CSA closely monitored the implementation phase of the RADARSAT Constellation Mission (RCM). An assessment of alternative sources of Synthetic Aperture Radar (SAR) data has also been initiated in case of a RADARSAT-2 failure prior to RCM operations. The assessment includes collaboration with international partners to develop contingency plans.

The growth of the Canadian space sector continued to represent a challenge in terms of its limited ability to market products and services worldwide. The space sector, especially small and medium enterprises, remained reliant on continued research and development investments to increase existing growth opportunities and seek new ones. In 2015–16, the CSA pursued the consolidation of technology development and demonstration activities under one branch. This will help reduce the lag between ideas generation and implementation. In addition, the CSA has put in place consultation structures to develop a coordinated innovation roadmap. This has reduced the risk of missed opportunities to join international space projects and contributed to the objective of addressing future national needs and priorities.

While developing and seeking new opportunities, the CSA continued to advance space robotics, optics, satellite communications, space-based radar and other key technologies, in order to maintain Canada's current competitive edge.

Finally, implementation and technical difficulties associated with space missions represented another source of risks. Associated with the international aspect of some projects, these challenges could have led to schedule slippages and cost increases. In order to mitigate those

risks, the CSA continued to strengthen its project management capacity. Among the activities conducted in 2015–16, were the review of the Project Management Framework, the initiation of a community of practice in project management, and the adoption of quarterly presentations on project status to the senior management committee, thus enhancing the management and control process already in place.

Organizational Priorities

The CSA identified four organizational priorities in the 2015–16 Report on Plans and Priorities. Progress achieved in each of these priorities is reflected below.

Name of Priority

Sustainable Infrastructure for Space-Based Observation.

Description

Ensure space-based observation data, including that from the RADARSAT Constellation Mission (RCM), will efficiently meet the public sector's needs and requirements, and supports government plans to foster innovation, science and international collaboration in key areas, including specialized data pertaining to climate change and Canada's natural resources.

Priority Type[1]

Ongoing

Key Supporting Initiatives

Planned Initiatives	Start Date	End Date	Status	Link to the Organization's Program(s)
Progress with the manufacturing phase of the RCM.	2013	2018	On track	1.1 Space Data, Information and Services
Develop the SAR component of the data policy under the RCM data policy.	2005	2017	On track	1.1 Space Data, Information and Services
Support the integration of new capabilities offered by RCM into government operations.	2010	2018	On track	1.1 Space Data, Information and Services

1. Type is defined as follows: previously committed to—committed to in the first or second fiscal year prior to the subject year of the report; ongoing—committed to at least three fiscal years prior to the subject year of the report; and new—newly committed to in the reporting year of the Report on Plans and Priorities or the Departmental Performance Report.

Manage access to RADARSAT-2 data.	2007	2019	On track	1.1 Space Data, Information and Services
Initiate the development of options with GoC organizations for SAR Data continuity.	2015	2017	On track	1.1 Space Data, Information and Services
Increase Canada's capacity to detect and track coastal maritime traffic with AIS technology by proceeding with the launch of M3MSat.	2008	2016	On track	1.1 Space Data, Information and Services
Advance Canada's participation in the development of new tools for improved sustainable use of Earth's water resource through the current SWOT mission in partnership with NASA and the French Space Agency (CNES).	2013	2023	On track	1.1 Space Data, Information and Services

Progress Toward the Priority

Significant progress was made in the manufacturing of the RCM satellites throughout 2015–16. Most of the subsystems have been completed for all three satellites. Assembly, integration and testing of the payloads for the first two satellites have been completed. Challenges in completing the flight software have delayed the completion of the first bus (satellite platform) by about six months. This deferred the start of the satellite-level assembly, integration and testing of the first satellite to the fall of 2016. Assembly and integration of the bus for the second satellite was started and is well underway. The detailed design phase of the RCM ground segment was completed, and the building of the individual ground segment subsystems was started in the second half of 2015–16. Upgrades to the CSA headquarters at Saint-Hubert to accommodate the RCM ground segment were started and are on schedule to be completed for the end of 2016. A contract was awarded to SpaceX for the launch of the three RCM satellites in 2018.

To enable users to make use of the new capabilities brought by the RCM, the CSA continued to support the development of pre-operational and operational applications. Twelve projects with federal organizations were conducted, as planned. Outreach activities were also conducted at major events in Canada to promote the RCM's usage and capabilities.

Discussions were conducted with stakeholders aiming for an RCM Data Policy to be approved in summer 2017, one year before the RCM launch.

Once again this year, the coordination of RADARSAT-2 data requests among federal users resulted in a more sustainable consumption of the data allocation. An amount of $37M was deducted from the Government of Canada allocation. This amount is below the annual consumption ceiling set to ensure the

allocation credit will last until FY 2019–20. After that, data continuity will be provided by the RCM. RADARSAT-1 archives are also of high interest to researchers who continue to use these valuable data.

The CSA initiated consultations with GoC organizations to determine their requirements regarding long-term SAR Data needs, beyond the RCM. The CSA also initiated consultations with industrial leaders to investigate technology and market trends.

The CSA increased Canada's capacity to detect and track coastal maritime traffic with Automatic Identification System (AIS) technology by preparing for the June 2016 launch and early operations of the Maritime Monitoring and Messaging Microsatellite (M3MSat). The CSA also conducted a study to determine needs and gap opportunities for AIS data by 18 Canadian government stakeholder organizations. Six project activities, to be undertaken by the value-added industry, have been selected to develop applications concepts using the Automatic Identification System (AIS) data.

The CSA advanced Canada's participation in the development of new tools for improved sustainable use of Earth's water resources through its participation in the Surface Water and Ocean Topography (SWOT) mission in partnership with the National Aeronautics and Space Administration (NASA) and the French Space Agency (Centre national d'études spatiales (CNES)). The CSA contributed to the successful Preliminary Design Review led by NASA. Science activities on instrument operations, monitoring, data processing, validation, distribution and archiving were also conducted by partner federal departments as planned.

Name of Priority

Review of Canada's Space Exploration Program, including future participation in the International Space Station (ISS) Program.

Description

Meet Canada's obligations towards the International Space Station and position Canada to contribute to new discoveries in upcoming planetary science, space astronomy and human spaceflight missions with the objective of strengthening fundamental research, innovation and technological development.

Priority Type

Ongoing

Key Supporting Initiatives

Planned Initiatives	Start Date	End Date	Status	Link to the Organization's Program(s)
In consultation with Canadian industry, academia and international partners, develop a roadmap of space exploration missions and identify potential Canadian contributions.	May 2015	February 2016	Completed	1.2 Space Exploration
Prepare recommendations to government regarding the continuation of Canada's commitment to the ISS Program after 2020.	November 2015	March 2016	Completed	1.2 Space Exploration
To support fundamental research and new discoveries, undertake concept and science studies (WFIRST + New Frontiers 4).	April 2015	2017	On track	1.2 Space Exploration

Progress Toward the Priority

The Space Exploration priority has been achieved. In reviewing the Space Exploration Program, the CSA was able to identify potential flexibility and opportunities for future space exploration missions. This review also allowed for the identification of partnership opportunities with Canadian academia, industry, and international partners (NASA, ESA and other space agencies) in planetary science and space astronomy. In human exploration, the program review prepared recommendations to government regarding the continuation of Canada's commitment to the International Space Station (ISS) Program after 2020. As a

result of decisions made in Budgets 2015 and 2016 to extend Canada's participation in the ISS to 2024, the CSA developed options for the future of human spaceflight. In consultation with Canadian industry, academia and foreign partners, the CSA also updated the space exploration mission roadmap.

The priority contributed to the achievement of the government mandate with respect to fundamental research and new discoveries. The CSA undertook concept and science studies with academia and the private sector to prepare potential Canadian science and technology contributions to upcoming missions in health and life science, space astronomy and planetary science so that Canadians could take part in future missions of discovery.

Improvement with regard to the initiatives supporting the Space Exploration Priority deal primarily with science, where roadmaps were drawn to better align the health and life science, space astronomy and planetary research priorities with other space agencies in order to implement collaborations leading to new space missions.

Following the Evaluation Report on the Advanced Exploration Technology Development sub-sub-program (SSP), most activities and funds for that SSP have been transferred to the main technology development program within the Space Technology Development Program to improve efficiency and impact.

The Minister of Science's mandate letter will have an influence on the future direction of this priority by enhancing the focus on fundamental research and innovation and setting directions for upcoming opportunities for international cooperation on space exploration missions.

Name of Priority

Consolidate both the CSA's technology development and capability demonstration activities.

Description

Support innovation, science, technology development and capability demonstration in the Canadian space sector to increase their competitiveness and position Canadian industries and universities for future global space opportunities.

Priority Type

Ongoing

Key Supporting Initiatives

Planned Initiatives	Start Date	End Date	Status	Link to the Organization's Program(s)
Establish a formal internal and external consultation structure to support the development of a coordinated space innovation roadmap.	April 2015	2018	On track	1.3 Future Canadian Space Capacity
Start discussions to both leverage existing OGD expertise and programs to better support space industry.	April 2015	Ongoing	On track	1.3 Future Canadian Space Capacity
Consolidate the CSA's space technology development funds to industry and academia to further support future government missions in space (government needs), industrial competitiveness and academic partnerships.	April 2015	March 2016	Completed	1.3 Future Canadian Space Capacity
Consolidate the CSA's space capability demonstration activities to further respond to government, industry and academia needs and address technological, scientific, and operational demonstration requirements using various space and non-space platforms.	April 2015	March 2017	On track	1.3 Future Canadian Space Capacity

Progress Toward the Priority

To ensure that Canada continues to play a vital role in space innovation, and that GoC continues to pursue excellence in niche areas of space science and technology, the CSA has consolidated its technology development activities and begun consolidating its capability demonstration activities. In fact, the consolidation of non-space demonstration activities was completed while the integration of space demonstration activities was pursued.

This consolidation of related funds and human resources under the responsibility of one sector was undertaken to allow the CSA to offer a simplified one-window approach to the Canadian space sector. It is also aimed at reducing the time lag between theory and implementation of new or upgraded space-related technologies. Activities ranged from R&D to timely flight demonstration with the aim of positioning the Canadian space sector for global opportunities by increasing space and market access and readiness.

More specifically, the funds and human resources of the *Exploration Core* initiative, formerly managed by the Space Exploration Branch, were transferred to the Space Science and Technology Branch. This consolidation will further support future government missions in space, industrial competitiveness and academic research and partnerships. It will also more effectively respond to government, industry and academia needs and address operational demonstration requirements using various space and non-space platforms.

An internal and external consultation structure to support the development of a coordinated space innovation roadmap was initiated, as well as discussions to both leverage existing other government department (OGD) expertise and programs to support the space industry and the academic community, as well as to further collaboration among them. In particular, the CSA has initiated discussions with a view to formalizing a partnership arrangement with the Consortium for Aerospace Research and Innovation in Canada (CARIC) and the Built in Canada Innovation Program (BCIP). Such initiatives will be pursued throughout 2016–17 and in the perspective of Canada's Innovation Agenda.

Name of Priority

Continue the implementation of Canada's Space Policy Framework.

Description

Ensure openness and broad collaboration in the planning, development and implementation of new space policies, strategies and initiatives, and continue to strengthen mechanisms in place to provide clear oversight and accountability in Canada's investments in space.

Priority Type

Ongoing

Key Supporting Initiatives

Planned Initiatives	Start Date	End Date	Status	Link to the Organization's Program(s)
Continue implementing and improving a whole-of-government approach to managing Canada's space activities.	2014	Ongoing	On track	1.4 Internal Services
Continue putting in place streamlined and efficient project management processes.	2013	2017	On track	1.4 Internal Services
Continue aligning the CSA's organizational structure to better respond to the Space Policy Framework and government priorities.	2014	2018	On track	1.4 Internal Services
Continue with the optimization of resources and excellence in the implementation, oversight and accountability of space-related initiatives that will be the core of the 2017–22 Investment Plan.	2014	2017	On track	1.4 Internal Services

Continue to work with space industry leaders and other stakeholders to identify ways in which they can play a stronger leadership role to ensure that the economic value of the government's space investments are fully realized.	2014	Ongoing	On track	1.4.1 Management and Oversight

Progress Toward the Priority

The CSA has made progress toward the establishment of an organizational structure that is responsive to the strategic objectives of Canada's Space Policy Framework and to the priorities of the Government. The Policy Branch has been strengthened and restructured to better deliver on CSA priorities, by focusing on strategic policy engagement of key stakeholders from GoC organizations, academia and industry; economic analysis and research; and international and regulatory affairs.

The CSA has undertaken several initiatives to contribute to the foundational analysis that will be required for the development of meaningful, long-term objectives that meet the intent of Canada's Space Policy Framework. Studies were initiated into the challenges and opportunities facing Canada's space industry; the value proposition for space was investigated; and ongoing policy advice and support was provided to space program governance bodies and the Deputy Minister committees on Science and Technology and the Arctic.

The CSA undertook outreach activities during the last year with space industry leaders and other stakeholders, including other government departments and academia, to identify ways in which they can play a stronger leadership role to ensure that the economic value of the government's space investments are fully realized. The Space Advisory Board met to provide advice to the Minister of Innovation, Science and Economic Development on the CSA and the Canadian Space Program. Senior management meetings were held with stakeholders aimed at supporting the innovation and growth potential of space organizations through a better understanding of their strengths and strategic objectives.

The CSA continued to make efforts to improve space cooperation with key international partners. This included participation in strategic events at the international level such as the International Astronautical Congress (IAC), development of work related to the European Space Agency's Advanced Research in Telecommunications Systems (ESA ARTES) program, participation in the United Nations Committee on the Peaceful Uses of Outer Space, including support of the nomination and election of the current Canadian Chair, and participated in Organisation for Economic Co-operation and Development (OECD) committees.

The CSA continued to actively support activities and programs aligned with the "Inspiring Canadians" principle of motivating young Canadians to pursue careers in science, technology, engineering and math, as outlined in the Space Policy Framework.

For more information on organizational priorities, see the Ministers' mandate letters.[iii]

Section II: Expenditure Overview

Actual Expenditures

Budgetary Financial Resources (dollars)

2015–16 Main Estimates	2015–16 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	Difference (actual minus planned)
483,428,281	483,428,281	501,568,928	412,799,058	(70,629,223)

Human Resources (Full-Time Equivalents [FTEs])

2015–16 Planned	2015–16 Actual	2015–16 Difference (actual minus planned)
613.3	591.4	(21.9)

Budgetary Performance Summary

Budgetary Performance Summary for Program(s) and Internal Services (dollars)

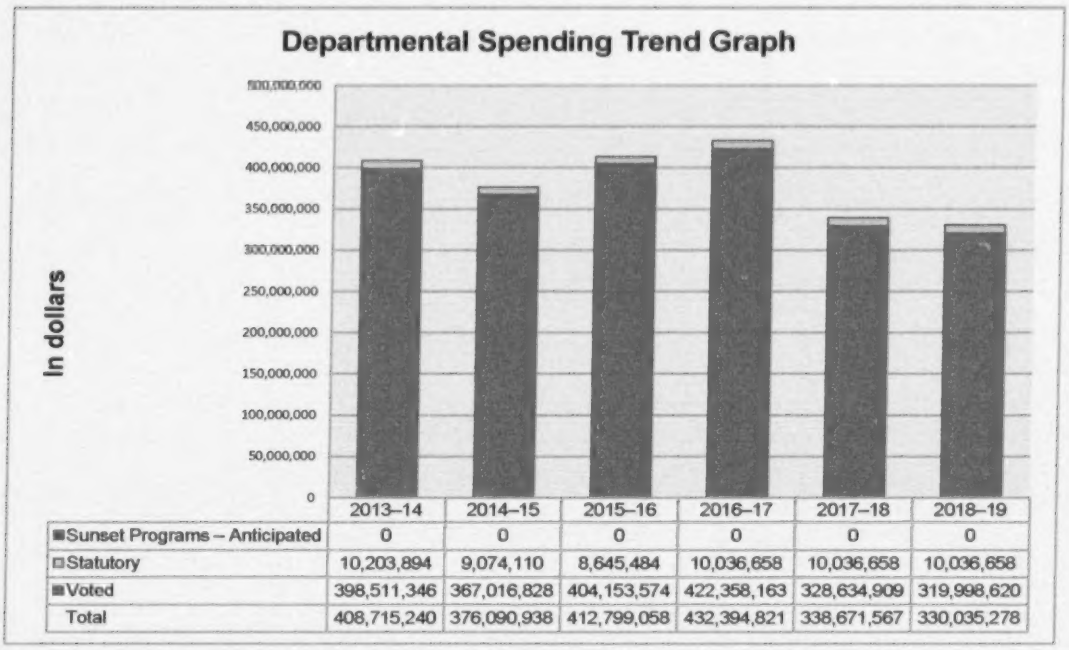
Program(s) and Internal Services	2015–16 Main Estimates	2015–16 Planned Spending	2016–17 Planned Spending	2017–18 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	2014–15 Actual Spending (authorities used)	2013–14 Actual Spending (authorities used)
Strategic Outcome: Canada's exploration of space, provision of space services and development of its space capacity meet the nation's needs for scientific knowledge, innovation and information.								
Space Data, Information and Services	259,609,001	259,609,001	215,086,172	122,494,062	263,420,570	209,187,061	175,496,334	207,544,469
Space Exploration	112,407,879	112,407,879	99,437,361	99,827,265	120,420,790	96,419,798	97,329,795	96,501,810
Future Canadian Space Capacity	66,268,193	66,268,193	66,094,200	65,800,960	67,887,841	61,804,033	58,018,955	55,453,614
Subtotal	438,285,073	438,285,073	380,617,733	288,122,287	451,729,201	367,410,892	330,845,084	359,499,893
Internal Services Subtotal	45,143,208	45,143,208	51,777,088	50,549,280	49,839,727	45,388,166	45,245,854	49,215,347
Total	483,428,281	483,428,281	432,394,821	338,671,567	501,568,928	412,799,058	376,090,938	408,715,240

The changes in Expenditures since 2013–14 are mainly due to the following:

- $397 million allocated through Budget 2010 over five years (2010–11 to 2015–16) in order to develop the RADARSAT Constellation Mission (RCM) under the Space Data, Information and Services Program;
- An additional $374 million over six years (2013–14 to 2018–19) allocated for the RCM from the Fiscal Framework and Other Government Department transfers to the CSA;
- The cumulative impact of the re-profiling of funds associated with the sound management of high-risk projects and programs.

The 2015–16 total variance of $70.6 million between Planned Spending and the Actual Spending is mainly due to the re-profiling of funds related to the variations in the payment schedules of the implementation cycle for certain activities, which are an inherent implementation characteristic of the Canadian Space Program. Detailed variances by Sub-Sub-Program are available on the CSA's website.[iv]

Departmental Spending Trend



	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Sunset Programs – Anticipated	0	0	0	0	0	0
Statutory	10,203,894	9,074,110	8,645,484	10,036,658	10,036,658	10,036,658
Voted	398,511,346	367,016,828	404,153,574	422,358,163	328,634,909	319,998,620
Total	408,715,240	376,090,938	412,799,058	432,394,821	338,671,567	330,035,278

The CSA's annual A-Base budget of $300 million was initially established in Budget 1999 ($215.4 million in 2015 dollars) and is now of the order of $260 million. Significant factors reflected in the graph are:

- The re-profiling of funds resulting from sound management of high-risk projects and programs has had a beneficial cumulative impact (e.g. in terms of high technology risks, long-term development cycle, uncertainties with work schedules, implementation delays).

- Budget 2010 allocated $397 million to the CSA over five years (2010–11 to 2014–15) to develop the RADARSAT Constellation Mission (RCM). An additional $374.2 million over six years (2013–14 to 2018–19) was allocated for the RCM ($140.0 million of new funding from the Fiscal Framework and $234.2 million transferred from other government departments to the CSA).

- The CSA's contribution to the Budget 2012 Strategic Operating Review was $7.9 million for FY 2012–13, $24.7 million for FY 2013–14 and $29.5 million for FY 2014–15.

- Additional funding and expenditure authority of $12.0 million was authorized during FY 2014–15 for two years (FY 2014–15 and 2015–16) in order to provide enhanced space-based Automatic Identification System (AIS) data services.

- Additional funding and expenditure authority of $7.9 million over two years (FY 2015–16 and FY 2016–17) was authorized for the Maritime Monitoring and Messaging Microsatellite (M3MSat) project due to the increased cost of the launch provider and associated launch delay.

- Additional funding of $9.9 million over two years (FY 2015–16 and FY 2016–17) was authorized to perform accelerated infrastructure upgrades and repairs at the David Florida Laboratory in line with the 2014 Economic Action Plan – Federal Infrastructure announcements.

- Additional funding of $9.5 million through the re-profiling of funds from the Fiscal Framework to FY 2016–17 was authorized for the provision of value-added satellite reports/images for humanitarian needs.

Expenditures by Vote

For information on the Canadian Space Agency's organizational voted and statutory expenditures, consult the *Public Accounts of Canada 2016*.[v]

Alignment of Spending With the Whole-of-Government Framework

Alignment of 2015–16 Actual Spending With the Whole-of-Government Framework[vi] (dollars)

Program	Spending Area	Government of Canada Outcome	2015–16 Actual Spending
1.1 Space Data, Information and Services	Government Affairs	Well-managed and efficient government operations	209,187,061
1.2 Space Exploration	Economic Affairs	An innovative and knowledge-based economy	96,419,798
1.3 Future Canadian Space Capacity	Economic Affairs	An innovative and knowledge-based economy	61,804,033

Total Spending by Spending Area (dollars)

Spending Area	Total Planned Spending	Total Actual Spending
Economic affairs	178,676,072	158,223,831
Social affairs	0	0
International affairs	0	0
Government affairs	259,609,001	209,187,061

Financial Statements and Financial Statements Highlights

Financial Statements

Financial Statements are available on the Canadian Space Agency's website.[vii]

Financial Statements Highlights

The financial highlights presented below are intended to serve as a general overview of the Canadian Space Agency's financial position and operations. More detailed information is provided in the CSA's financial statements available online in the section on Departmental Performance Reports[viii] (DPRs) which are prepared using an accrual accounting basis. Below are explanations for the variances in each major grouping based on the most significant factors that affected each grouping during 2015–16.

Condensed Statement of Operations (unaudited) For the Year Ended March 31, 2016 (dollars)

Financial Information	2015–16 Planned Results	2015–16 Actual	2014–15 Actual	Difference (2015–16 actual minus 2015–16 planned)	Difference (2015–16 actual minus 2014–15 actual)
Total expenses	357,243,570	317,670,747	322,965,497	(39,572,823)	(5,294,750)
Total revenues	0	22,733	129,064	22,733	(106,331)
Net cost of operations before government funding and transfers	357,243,570	317,648,014	322,836,433	(39,595,556)	(5,188,419)

Total planned expenses for 2015–16 were $357.2 million, an overstatement of $39.5 million compared to actual results of $317.7 million. The variance between planned and actual expenses is mainly explained by the following:

- Amortization expenses of assets under construction, planned to be capitalized to tangible capital assets in 2015–16, were lower than projected ($8 million) as well as the change in the remaining useful life of the International Space Station's assets ($26 million);
- Less data (imagery) was purchased ($8.0 million) from RADARSAT-2 data credit than planned.

The residual difference of $2.5 million is composed of multiple variations arising from the planned forecasts established in December 2014, compared to the actual results.

Total 2015–16 expenses were $317.7 million, a $5.3 million decrease over the previous year's total expenses of $323.0 million and essentially the same as the preceding year with an insignificant decrease of 1.6%.

The Agency's total revenues were $0.02 million in 2015–16 ($0.1 million in 2014–15). For the purpose of this report, this amount represents the re-spendable part of the revenues which are 1% of the total Agency generated revenues of $3.8 million. This remained stable from 2014–15. The majority of the revenues are reported under the sale of goods and services provided by the David Florida Laboratory, i.e. sale of goods and services to private business or other GoC departments, under Location and Use of Public Property and under Other Revenues (penalty revenues).

Condensed Statement of Financial Position (unaudited) As at March 31, 2016 (dollars)

Financial Information	2015–16	2014–15	Difference (2015–16 minus 2014–15)
Total net liabilities	115,500,963	124,123,391	(8,622,428)
Total net financial assets	108,050,031	115,345,397	(7,295,366)
Departmental net debt	7,450,932	8,777,994	(1,327,062)
Total non-financial assets	1,509,888,489	1,407,807,298	102,081,191
Departmental net financial position	1,502,437,557	1,399,029,304	103,408,253

Total net liabilities of $115.5 million are mostly made up of accounts payable and accrued liabilities in the amount of $106.2 million (91.9%). These represent goods and services that were received at year-end but have not been paid by the Agency. Some of the most significant liabilities recorded at year-end are for the International Space Station, under the Space Exploration Program (1.2), and for the RADARSAT Constellation Mission (RCM), under the Space Data, Information and Services Program (1.1).

The $8.6 million decrease in net liabilities ($115.5 million for 2015–16 compared to $124.1 million for 2014–15) is mainly explained by a $13.9 million decrease in the contractor's holdbacks (Phase completion for the RCM project).

Total assets were $1.62 billion at the end of 2015–16 ($108 million of net financial assets and $1.51 billion in non-financial assets), a $94.8 million (6.2%) increase compared with the

previous year's total of $1.52 billion. The variance is mainly due to the increase in tangible capital assets.

Tangible capital assets of $1.32 billion represent 82% of total assets are mainly composed of space-related assets ($1.26 billion).

Section III: Analysis of Program(s) and Internal Services

Programs

1.1: Space Data, Information and Services

Description

This Program includes the provision of space-based solutions (data, information and services) and the progression of their utilization. It also serves to install and run ground infrastructure that processes the data and operates satellites. This Program utilizes space-based solutions to assist Government of Canada (GoC) organizations in delivering growing, diversified or cost-effective programs and services within their mandate, which is related to key national priorities, such as sovereignty, defence, safety and security, resource management, environmental monitoring and the North. It also provides academia with data required to perform its own research.

The services delivered through this Program are rendered, and the data and information are generated and processed, with the participation of the Canadian space industry, academia, GoC organizations, national and international organizations, such as: foreign space agencies, not-for-profit organizations, as well as provincial and municipal governments. This collaborative effort is formalized under national and international partnership agreements, contracts. This Program is also funded through the Class Grant and Contribution Program.

Program Performance Analysis and Lessons Learned

The CSA continued its sustained efforts to maintain and increase the number of GoC programs offering more diversified and efficient services to Canadians through the use of space-based systems.

The CSA's sustainable research and development (R&D) funding support has helped advance other government departments' (OGDs') scientific efforts from research to operations, developing cost-effective use of Synthetic Aperture Radar (SAR) data in support of their mandates. For example, in 2015–16, Agriculture and Agri-Food Canada (AAFC) announced that its crop monitoring activities have integrated SAR data into routine operations, bringing decades of research into innovative agricultural monitoring capabilities to the benefit of the Canadian agricultural sector.

This new operational usage added to the increasing number of OGD programs incorporating SAR data into the delivery of services to Canadians. In 2015–16, and based on improved methods of collecting information, the CSA identified and surveyed 84 OGD programs using SAR data.

However, important challenges remain with the collection and analysis of SAR data usage within GoC, such as better discrimination among science, R&D and operational usage in GoC programs. The CSA will continue to refine its methodologies for collecting information on the use of data within the GoC and further promote innovative use of space data.

The CSA continued to support the generation of high-quality Sun-Earth System Science data products from a number of Canadian space science instruments. Many of the space-based instruments make measurements of atmospheric gases and aerosols related to air pollution, climate science and recovery of the ozone layer (e.g. MOPITT on Terra, OSIRIS on Odin and SCISAT). Other instruments make measurements of the Earth's ionosphere and magnetosphere that are important for science and modelling of "space weather," caused by solar activity, and the impacts on radio communications, navigation systems and ground infrastructure (e.g. ePOP on CASSIOPE, EFIs on Swarm, GO and THEMIS). The operations of these instruments as well as the data processing, validation and distribution are done primarily by Canadian university researchers. The CSA encourages collaborative research involving scientists in government and in academia because it fosters the transfer of new knowledge from analysis of these space data to government departments where it is used to improve environmental prediction systems and services.

The CSA continued to support improved access to Sentinel Satellite SAR data, responding to an increasing appetite for SAR data, in particular for the maritime domain applications such as ship detection, oil spills, sea ice mapping and forecasting.

The CSA continued to support OGDs' need for new cost-effective innovative space-based information solutions, as well as the need to access highly qualified personnel (HQP) in SAR domain sustainable operations. The CSA continued investing in industrial and academic capacity enhancement, which benefits Canadian industry and universities and ensures that current and future needs of the GoC for innovative information products and services are met.

The CSA continued to support OGDs commitments to international initiatives, coordinating and securing access to valuable SAR data that contribute to Canadian engagement in such areas as Climate Change, Food Security, Disaster Management and Northern issues.

Budgetary Financial Resources (dollars)

2015–16 Main Estimates	2015–16 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	2015–16 Difference (actual minus planned)
259,609,001	259,609,001	263,420,570	209,187,061	(50,421,940)

Human Resources (Full-Time Equivalents [FTEs])

2015–16 Planned	2015–16 Actual	2015–16 Difference (actual minus planned)
108.2	102.6	(5.6)

Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
1. GoC organizations offer more diversified or cost-effective programs and services due to their utilization of space-based solutions.	1. Number of new GoCs programs offering more diversified or efficient services.	1	1

1.2: Space Exploration

Description

This Program provides valuable Canadian science, signature technologies and qualified astronauts to international space exploration endeavours. This Program contributes to the Government of Canada's Science and Technology Strategy. It fosters the generation of knowledge as well as technological spinoffs that contribute to a higher quality of life for Canadians. It generates excitement within the population in general and contributes to nation-building. This Program appeals to the science and technology communities. It is targeted mostly towards Canadian academia and international space exploration partnerships. Canadian industry also benefits from the work generated within this Program.

This Program is delivered with the participation of foreign space agencies and Government of Canada (GoC) organizations. This collaborative effort is formalized under international partnership agreement, contracts, grants or contributions.

Program Performance Analysis and Lessons Learned

Canadian technological contributions to international space exploration missions foster the generation of knowledge about the universe as well as technological spinoffs with terrestrial applications.

In 2015–16, Canadian scientists added to the body of knowledge in space life sciences, space astronomy and planetary sciences. A total of 299 peer-reviewed scientific publications were produced. This represents a slight decrease from the 362 publications written the previous year. However this year's result is in line with the average of 287 publications over the last four years.

Canadian companies were also successful in generating spinoffs including medical robotics, laser sensors as well as unmanned mobility platforms designed and built in Canada, providing high-quality jobs for Canadians.

In the area of medical robotics, the Canadian technologies and know-how developed for the International Space Station (Canadarm2 and Dextre) are being used to provide increased access, precision and dexterity, resulting in highly accurate and minimally invasive procedures to treat cancer and to support robotic surgery.

The technologies developed for laser sensors in space are being commercialized for terrestrial applications, and through a line of products that saw two new sensors appear in the last year, one sensor for low-reflecting environments and a versatile and powerful situational awareness sensor for real-time 3D automation solutions, along with a suite of software tools derived from those developed for space.

In the field of unmanned vehicles, one of the companies has already sold approximately 25 units of a highly specialized remotely operated unmanned mobility platform, and is planning similar sales in the coming year. These vehicles are being developed for applications including surveillance, agriculture and fire-fighting.

The CSA also supported re-utilization of Canadian know-how in space exploration with laser-based automated rendezvous and docking sensors being provided for commercial resupply vehicles intended to travel to the International Space Station.

With seven new terrestrial applications in 2015–16 and one space application re-utilizing technology, the spinoffs stemming from the Space Exploration Program will support the government's new Innovation Agenda.

An evaluation of the Advanced Exploration Technology Development (AETD) sub-sub-program was also concluded last year. Following recommendations, this sub-sub program has been merged with the Space Technology Development Program. This will improve efficiency and program results in the future.

Budgetary Financial Resources (dollars)

2015–16 Main Estimates	2015–16 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	2015–16 Difference (actual minus planned)
112,407,879	112,407,879	120,420,790	96,419,798	(15,988,081)

Human Resources (Full-Time Equivalents [FTEs])

2015–16 Planned	2015–16 Actual	2015–16 Difference (actual minus planned)
168.5	154.8	(13.7)

Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
1. Expansion of advanced scientific knowledge acquired through space exploration endeavours.	1. Number of peer-reviewed scientific publications, reports and conference proceedings using space exploration information and produced by researchers (sciences and technologies) in Canada.	200	299
2. Multiple use and applications of knowledge and know-how acquired through space exploration endeavours.	1. Number of terrestrial applications of knowledge and know-how acquired through space exploration endeavours.	2	7
	2. Number of space re-utilizations of knowledge and know-how acquired through space exploration endeavours.	1	1

1.3: Future Canadian Space Capacity

Description

This Program attracts, sustains and enhances the nation's critical mass of Canadian space specialists, fosters Canadian space innovation and know-how, and preserves the nation's space-related facilities capability. In doing so, it encourages private-public collaboration that requires a concerted approach to future space missions. This Program secures the nation's strategic and ongoing presence in space in the future and to preserve Canada's capability to deliver internationally renowned space assets for future generations. It is targeted at Canadian academia, industry and youth, as well as users of Canadian space solutions (Government of Canada (GoC) organizations) and international partners.

This Program is conducted with the participation of funding agencies, GoC organizations along with government facilities and infrastructure, foreign space agencies, not-for-profit organizations and provincial governments. This collaborative effort is formalized under contracts, grants, contributions or national and international partnership agreements.

Program Performance Analysis and Lessons Learned

In FY 2014–15 (the most recent year for which survey data is available), 4,226 Highly Qualified Personnel (HQP) benefitted from employment in the space sector and contributed to the sustained and strategic use of space. This is higher than the targeted 3,500 HQP by 21% or 726 HQP. However, it represents a decrease of 136 HQP or 3.1% from the previous year (FY 2013–14), which in turn saw a decrease of 74 HQP or 1.7% from the year before (FY 2012–13).

HQP numbers fluctuate from year to year, but over the long term an overall picture of growth emerges. Over the five-year period of 2009 to 2014, HQP increased by 12%, an average of 2.3% per year. The last two years have represented a down cycle in HQP positions across the country. Lower investments in space seem to have an especially important impact on maintaining HQP at organizations whose anchor client for space products is the government, or where a decrease in government investment has led to a lack of innovation or competitiveness in the sector.

The second indicator provides the monetary value of all Research and Development (R&D) investments in the Canadian space sector from both internal and external sources for a given organization. The result for FY 2014–15 is lower by $38 million or 20.6% from the year before (FY 2013–14), which was slightly higher than the $165 million reported for FY 2012–13. Changes over the last year can be attributed mainly to one major space sector firm that reduced its R&D expenditures as their portfolio of projects declined.

The discrepancy between the target ($60 million) and the actual result ($146 million) stems from the initial methodology used to establish the target. The methodology considered only external

financial sources of R&D. The trend over the past two years will be reflected in future target setting which will include internal funding sources.

To improve the sector management practices and overall performance, approximately 5% of the workforce was allocated to the definition of new processes, internal coordination and prioritization of our activities. The definition of a specific Business Plan for the sector and the Monthly Program Reviews are good examples. These new approaches will contribute to improvements in both planning and monitoring, and ultimately have a positive impact on outputs.

Budgetary Financial Resources (dollars)

2015–16 Main Estimates	2015–16 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	2015–16 Difference (actual minus planned)
66,268,193	66,268,193	67,887,841	61,804,033	(4,464,160)

Human Resources (Full-Time Equivalents [FTEs])

2015–16 Planned	2015–16 Actual	2015–16 Difference (actual minus planned)
101.0	87.2	(13.8)

Performance Results

Expected Results	Performance Indicators	Targets	Actual Results
1. Canada holds a space community (academia, industry and government) able to contribute to the sustained and strategic Canadian use of space.	1. Number of FTE in the Canadian space sector.	3,500 HQP	4,226 HQP
	2. Monetary value of the Canadian space sector R&D investments.	$60 million	$146 million

Internal Services

Description

Internal services are groups of related activities and resources that are administered to support the needs of programs and other corporate obligations of an organization. Internal services include only those activities and resources that apply across an organization, and not those provided to a specific program. The groups of activities are Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Services; Materiel Services; and Acquisition Services.

Program Performance Analysis and Lessons Learned

The CSA provided strategic advice and leadership to the Minister for the successful implementation of the Space Policy Framework in support of the broad objectives of Canada's Innovation Agenda and provided leadership in promoting OGD activities and ensuring that they are aligned with the Space Policy Framework. To continue and build on strong relationships with both domestic and international space community leaders, the CSA has begun developing a comprehensive framework for engaging key stakeholders to identify ways in which the private sector can play a stronger leadership role to ensure that the economic value of the government's space investments are fully realized. Preliminary engagement mechanisms include regular meetings of government-industry working groups.

In pursuing the implementation of a stronger governance and decision-making process, the CSA reviewed its Investment Governance and Monitoring Framework and associated processes ensuring that decision making is aligned and optimized. To do so, the CSA developed simplified tools for the project gating approval process and increased the number of consideration opportunities for program sectors. These new tools will allow streamlined and faster pathways from propositions to decision making and operations.

The CSA continues to actively support activities and programs, led by the Communications and Public Affairs and Space Science and Technology Branches, which are aligned with "Inspiring Canadians" principle of motivating young Canadians to pursue careers in science, technology, engineering and math, as outlined in the Space Policy Framework.

After the second year of implementation of the workforce management strategy, the CSA's results in the "People Management" component of the MAF remained above average compared to large departments and agencies in almost all areas. More specifically, the following initiatives were approved: an action plan following the results of the 2014 Public Service Employee

Survey, a Brain Friendly program that promotes the health and wellness of CSA's employees through awareness, prevention and educational activities and a new staffing policy.

The CSA began to implement its three-year (2016–19) information management and information technology strategy. This strategy aims to effectively and efficiently manage all operational information assets and the organization's IT applications, according to their life cycle, to support all employees in the performance of their duties.

Budgetary Financial Resources (dollars)

2015–16 Main Estimates	2015–16 Planned Spending	2015–16 Total Authorities Available for Use	2015–16 Actual Spending (authorities used)	2015–16 Difference (actual minus planned)
45,143,208	45,143,208	49,839,727	45,388,166	244,958

Human Resources (FTEs)

2015–16 Planned	2015–16 Actual	2015–16 Difference (actual minus planned)
235.6	246.8	11.2

Section IV: Supplementary Information

Supporting Information on Lower-Level Programs

Supporting information on lower-level programs is available on the CSA's website.[ix]

Supplementary Information Tables

The following supplementary information tables are available on the CSA's website.[x]

- Details on Transfer Payment Programs of $5 Million or More
- Status Report on Transformational and Major Crown Projects
- Internal Audits and Evaluations
- Response to Parliamentary Committees and External Audits
- Status Report on Projects Operating With Specific Treasury Board Approval
- User Fees, Regulatory Charges and External Fees
- Departmental Sustainable Development Strategy

Federal Tax Expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures annually in the Report of Federal Tax Expenditures.[xi] This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs. The tax measures presented in this report are the responsibility of the Minister of Finance.

Organizational Contact Information

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Appendix: Definitions

appropriation (*crédit*): Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (*dépenses budgétaires*): Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

Departmental Performance Report (*rapport ministériel sur le rendement*): Reports on an appropriated organization's actual accomplishments against the plans, priorities and expected results set out in the corresponding Reports on Plans and Priorities. These reports are tabled in Parliament in the fall.

full-time equivalent (*équivalent temps plein*): A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

Government of Canada outcomes (*résultats du gouvernement du Canada*): A set of 16 high-level objectives defined for the government as a whole, grouped in four spending areas: economic affairs, social affairs, international affairs and government affairs.

Management, Resources and Results Structure (*Structure de la gestion, des ressources et des résultats*): A comprehensive framework that consists of an organization's inventory of programs, resources, results, performance indicators and governance information. Programs and results are depicted in their hierarchical relationship to each other and to the Strategic Outcome(s) to which they contribute. The Management, Resources and Results Structure is developed from the Program Alignment Architecture.

non-budgetary expenditures (*dépenses non budgétaires*): Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (*rendement*): What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

performance indicator (*indicateur de rendement*): A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

performance reporting (*production de rapports sur le rendement*): The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

planned spending (*dépenses prévues*): For Reports on Plans and Priorities (RPPs) and Departmental Performance Reports (DPRs), planned spending refers to those amounts that receive Treasury Board approval by February 1. Therefore, planned spending may include amounts incremental to planned expenditures presented in the Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their RPPs and DPRs.

plans (*plan*): The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

priorities (*priorité*)**:** Plans or projects that an organization has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired Strategic Outcome(s).

program (*programme*)**:** A group of related resource inputs and activities that are managed to meet specific needs and to achieve intended results and that are treated as a budgetary unit.

Program Alignment Architecture (*architecture d'alignement des programmes*)**:** A structured inventory of an organization's programs depicting the hierarchical relationship between programs and the Strategic Outcome(s) to which they contribute.

Report on Plans and Priorities (*rapport sur les plans et les priorités*): Provides information on the plans and expected performance of appropriated organizations over a three-year period. These reports are tabled in Parliament each spring.

results (*résultat*): An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (*dépenses législatives*): Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

Strategic Outcome (*résultat stratégique*): A long-term and enduring benefit to Canadians that is linked to the organization's mandate, vision and core functions.

sunset program (*programme temporisé*): A time-limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program. In the case of a renewal, the decision specifies the scope, funding level and duration.

target (cible): A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (*dépenses votées*): Expenditures that Parliament approves annually through an Appropriation Act. The Vote wording becomes the governing conditions under which these expenditures may be made.

Whole-of-government framework (*cadre pangouvernemental*): Maps the financial contributions of federal organizations receiving appropriations by aligning their Programs to a set of 16 government-wide, high-level outcome areas, grouped under four spending areas.

Endnotes

i CSA's mission and mandate: http://www.asc-csa.gc.ca/eng/about/mission.asp
ii Departmental Performance Reports: http://www.asc-csa.gc.ca/eng/publications/rp.asp
iii Minister's mandate letter: http://pm.gc.ca/eng/mandate-letters
iv Departmental Performance Reports: http://www.asc-csa.gc.ca/eng/publications/rp.asp
v Public Accounts of Canada 2016: http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html
vi Whole-of-Government Framework: http://www.tbs-sct.gc.ca/hgw-cgf/finances/rgs-erdg/wgf-ipp-eng.asp
vii Financial Statements: http://www.asc-csa.gc.ca/eng/publications/rp.asp
viii Departmental Performance Reports: http://www.asc-csa.gc.ca/eng/publications/rp.asp
ix Supporting information on lower-level programs : http://www.asc-csa.gc.ca/eng/publications/rp.asp
x Supplementary information tables: http://www.asc-csa.gc.ca/eng/publications/rp.asp
xi Report of Federal Tax Expenditures: http://www.fin.gc.ca/purl/taxexp-eng.asp